

Salvage & Reuse of Construction & Demolition Debris in Butler County

Many materials from construction and demolition projects can be reused or recycled!

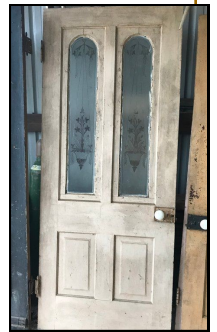


Construction and demolition (C&D) materials are the debris generated during construction, renovation and demolition of buildings, roads, and bridges. Many of these materials are items that can be salvaged, and reused or recycled into new construction projects thus avoiding disposal or the need to mine and process virgin materials. Construction and demolition waste makes up approximately 17.5 percent of Pennsylvania's municipal waste stream.



C&D materials often contain bulky, heavy materials such as:

- Concrete
- Wood (from buildings)
- Asphalt (from roads and roofing shingles)
- Gypsum (the main component of drywall)
- Metals
- Bricks
- Glass
- Plastics
- Salvaged building components (doors, windows, and plumbing fixtures)
- Trees, stumps, earth, and rock from clearing sites



What are some benefits to reducing C&D waste?

- Create employment and economic activity in the recycling industry;
- Reduce overall building project costs by avoiding purchase/disposal costs (and donation of recovered materials to qualified 501(c)(3) charities can provide a possible tax benefit);
- Conserve landfill space & need for fewer disposal facilities in the long run, potentially reducing associated environmental issues;
- Offset the environmental impact associated with extraction and consumption of virgin resources and production of new materials.

Reusing building materials has its primary benefit through resource and energy savings avoided by reducing the production of new materials. Some examples of reused C&D materials and applications are:



- Easy-to-remove items like doors, hardware, appliances, and fixtures
- Wood cutoffs can be used for many needs around a job site, and scrap wood can be chipped on site and used as mulch
- De-papered & crushed gypsum can be used, (in moderate amounts), as a soil amendment

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- Brick, concrete and masonry can be recycled on site and used as fill, subbase material or driveway bedding.
- Excess insulation from exterior walls can be used in interior walls as noise deadening material.
- Paint can be remixed and used in garage or storage areas, or as primer coat for other jobs.
- Packaging materials can be returned to suppliers for reuse. (Source E.P.A.)

After all options to reuse have been exhausted, many building components can be recycled where markets exist. Asphalt, concrete, and rubble can be recycled into aggregate or new asphalt and concrete products. Wood can be recycled into engineered-wood products, compost, mulch, etc. Metals are also valuable commodities to recycle. Did you know—there are at least two businesses in our region that sell reclaimed building materials and fixtures for reuse? Just do an internet search in your local area for “architectural salvage” and your local zip code.

Buying used C&D materials and recycled content products for use in new construction can help the local economy when materials are locally sourced. It can also lower construction and renovation costs.



Some Interesting Construction & Demolition Statistics:

- The U.S. generated over 600 million tons of construction-related waste in 2018. (EPA)
- 23% of the national waste stream is estimated to be C&D waste. (BTS)
- C&D waste generation in the U.S. increased by 342% from 1990 to 2018. (EPA)
- Between 2005 and 2018, C&D waste levels grew more than 10x faster than from 1990 to 2005. (EPA)
- In 2018 alone, demolitions added 567 million tons of debris to the national waste stream. (EPA)
- Demolition of roads and bridges accounted for 43% more debris than building demolition in 2015. (EPA)
- As much as 30% of all building materials delivered to a typical construction site can end up as waste. (ScienceDirect)
- Construction and demolition projects filled U.S. landfills with almost 145 million tons of waste in 2018. (EPA)
- More than 75% of all construction waste from wood, drywall, asphalt shingles, bricks and clay tiles ends up in landfills. (EPA)
- Concrete and asphalt concrete made up 85% of all U.S. C&D waste in 2018. (EPA)
- C&D waste and municipal solid waste (MSW) went to landfills in nearly equal amounts in 2018, despite total C&D waste outnumbering MSW levels 2-to-1. (EPA)



For More Information:

Pa. Recycling Markets Center—pennrmc.org

Construction & Demolition Recycling Association—cdrecycling.org

Construction and Demolition Waste Information from the PaDEP—
dep.pa.gov/Business/Land/Waste/SolidWaste/MunicipalWaste/Construction-Demolition-Waste/Pages/default.aspx

US Environmental Protection Agency—
epa.gov/smm/sustainable-management-construction-and-demolition-materials

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